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10/566,542	12/18/2006	Philip Caunt	GJE.7273T	5864
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SALIWANCHIK, LLOYD & EISENSCHENK A PROFESSIONAL ASSOCIATION PO Box 142950 GAINESVILLE, FL 32614			HUANG, CHENG YUAN	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/566,542	CAUNT ET AL.	
	Examiner	Art Unit	
	CHENG HUANG	1787	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 11 May 2011.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-11, 14, 17-19 and 43 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-11, 14, 17-19 and 43 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20110511.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application

6) Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11 May 2011 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-4, 6-10, 14, 18, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caselli et al. (EP 1146111) in view of Stevens (U.S. Patent No. 5,712,237) and Scheuing et al. (U.S. Patent Application Publication No. 2003/0220223).

5. Regarding claims 1 and 14, Caselli et al. teaches a composition for disinfecting a space (See Abstract) comprising one or more essential oils or essential oil components (paragraph [0033]), and a mixture of volatile and non-volatile solvents (paragraphs [0023], [0110], and [0124]) absorbed on a carrier (paragraph [0139]).

6. Caselli et al. fails to teach the claimed percent weight ratio of volatile to non-volatile solvent.

7. However, Stevens teaches a composition (See Title) comprising a mixture of volatile and non-volatile solvents, wherein the claimed percent weight ratio of volatile to non-volatile solvent is in the range of 50:3 to 1:15 (col. 6, lines 30-35, col. 10, lines 50-52), which encompasses the claimed range of 3:1 to 1:3.

8. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose a percent weight ratio, including those claimed, for the volatile to non-volatile solvents of Caselli et al. to control the distillation, compatibility, likelihood of forming azeotropes with other cosolvents, solubility with hydrophilic stains and contaminants, and cost (Stevens, col. 6, lines 24-30, col. 10, lines 56-67).

9. Caselli et al. fails to teach the claimed carrier material.

10. However, Scheuing et al. teaches a composition for disinfecting a space (paragraph [0042]) wherein carrier is a non-woven material and the non-woven carrier is a combination of cellulose and polypropylene (paragraph [0072]).

11. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose a non-woven cellulose and polypropylene combination for the carrier of Caselli et al. as modified by Stevens as an effective absorbent material (Scheuing et al. paragraphs [0070]-[0074]).

12. Regarding the limitation that the composition is for disinfecting a space and “vapor-producing” as presently claimed, applicants attention is drawn to MPEP 2111.02 which states that “if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention’s limitations, then the preamble is not considered a limitation and is of no significance to claim construction”. Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

13. It is the examiner’s position that the preamble does not state any distinct definition of any of the claimed invention’s limitations and further that the purpose or intended use, i.e. “vapor-producing” or “for disinfecting a space”, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art composition and further that the prior art structure which is a composition identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

14. Regarding claims 2, 3, and 6, Caselli et al. teaches wherein the essential oil component is cinnamic aldehyde, cinnamic alcohol, and/or cinnamon oil (paragraph [0036]).

15. Regarding claim 4, Caselli et al. teaches wherein the essential oil component is eugenol (paragraph [0047]).

16. Regarding claims 7 and 8, Caselli et al. teaches wherein the volatile solvent is an alcohol and wherein the alcohol is isopropanol (paragraph [0124]).

17. Regarding claim 9, Caselli et al. teaches wherein the non-volatile solvent is water (paragraph [0023]).

18. Regarding claim 10, Caselli et al. teaches wherein the non-volatile solvent is glycol (paragraph [0111]).

19. Regarding claim 18, while Caselli et al. as modified by Stevens and Scheuing et al. does not disclose the size limitation as claimed, it is noted that limitations relating to size are not sufficient to patentably distinguish the present invention over the prior art. Furthermore, given that the structural laminate of Caselli et al. as modified by Stevens and Scheuing et al. would not perform differently than that claimed, the claimed structural laminate is not patentably distinctly from that of Caselli et al. as modified by Stevens and Scheuing et al., given that the courts have held that where the only difference between the prior art and the claims is a recitation of relative dimensions, there is no patentable distinction between the claims and the prior art (see MPEP 2144.04 IVA). Finally, it is noted one of ordinary skill would easily recognize the composite of the prior art could be sized to fulfill a desired end use.

20. Regarding claim 43, Caselli et al. teaches a composition for disinfecting a space (See Abstract) comprising one or more essential oils or essential oil components (paragraph [0033]),

and a mixture of volatile and non-volatile solvents (paragraphs [0023], [0110], and [0124]) absorbed on a carrier (paragraph [0139]), wherein the volatile solvent is a lower alcohol (paragraph [0124]) and the non-volatile solvent is water (paragraph [0023]) and/or a glycol (paragraph [0111]).

21. Caselli et al. fails to teach the claimed percent weight ratio of volatile to non-volatile solvent.

22. However, Stevens teaches a composition (See Title) comprising a mixture of volatile and non-volatile solvents, wherein the claimed percent weight ratio of volatile to non-volatile solvent is in the range of 50:3 to 1:15 (col. 6, lines 30-35, col. 10, lines 50-52), which encompasses the claimed range of 3:1 to 1:3.

23. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose a percent weight ratio, including those claimed, for the volatile to non-volatile solvents of Caselli et al. to control the distillation, compatibility, likelihood of forming azeotropes with other cosolvents, solubility with hydrophilic stains and contaminants, and cost (Stevens, col. 6, lines 24-30, col. 10, lines 56-67).

24. Caselli et al. fails to teach the claimed carrier material.

25. However, Scheuing et al. teaches a composition for disinfecting a space (paragraph [0042]) wherein carrier is a non-woven material and the non-woven carrier is a combination of cellulose and polypropylene (paragraph [0072]).

26. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose a non-woven cellulose and polypropylene combination for the carrier of Caselli et al.

as modified by Stevens as an effective absorbent material (Scheuing et al. paragraphs [0070]-[0074]).

27. Regarding the limitation that the composition is for disinfecting a space and “vapor-producing” as presently claimed, applicants attention is drawn to MPEP 2111.02 which states that “if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention’s limitations, then the preamble is not considered a limitation and is of no significance to claim construction”. Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

28. It is the examiner’s position that the preamble does not state any distinct definition of any of the claimed invention’s limitations and further that the purpose or intended use, i.e. “vapor-producing” or “for disinfecting a space”, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art composition and further that the prior art structure which is a composition identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

29. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caselli et al. (EP 1146111) in view of Stevens (U.S. Patent No. 5,712,237) and Scheuing et al. (U.S. Patent

Application Publication No. 2003/0220223), and further, in view of Julemont et al. (U.S. Patent No. 6,380,152)

30. Caselli et al. as modified by Stevens and Scheuing et al. is relied upon as disclosed above.

31. Caselli et al. as modified by Stevens and Scheuing et al. fails to disclose wherein the essential oil component is tea tree oil.

32. However, Julemont et al. teaches a composition (col. 1, lines 56) comprising one or more essential oils (col. 2, line 48-col. 3, line 30) wherein the essential oil is tea tree oil (col. 3, line 3) and wherein the composition is absorbed on a carrier (col. 1, lines 48-51).

33. Given that Julemont et al. teaches essential oils including those of anise, clove, aniseed, lemongrass, lemon, lavender, and tea tree oil (col. 2, line 48-col. 3, line 30) and given that Caselli et al. teaches essential oils including those of anise, clove, aniseed, lemongrass, lemon, and lavender that act as proteins denaturing agents to exhibit antimicrobial activity and contribute to the safety profile when used to disinfect any surface, and impart pleasant odor to a composition without the need of adding a perfume, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute one of the essential oils in the composition of Caselli et al. as a known functional equivalent of tea tree oil. Substitution of known components with other components that yield predictable results would have been obvious to one of ordinary skill in the art since predictable characteristics such as antimicrobial activity that may be used to disinfect surfaces. See MPEP 2144.06 II.

34. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caselli et al. (EP 1146111) in view of Stevens (U.S. Patent No. 5,712,237) and Scheuing et al. (U.S. Patent Application Publication No. 2003/0220223), and further, in view of McCue et al. (U.S. Patent No. 5,403,587).

35. Caselli et al. as modified by Stevens and Scheuing et al. is relied upon as disclosed above.

36. Caselli et al. as modified by Stevens and Scheuing et al. fails to teach wherein the non-volatile solvent is a glycol wherein the glycol is (mono)propylene glycol.

37. However, McCue et al. teaches wherein the non-volatile solvent is a glycol wherein the glycol is (mono)propylene glycol (col. 4, lines 15-16).

38. It would have been obvious to one of ordinary skill in the art at the time of the invention to include (mono)propylene glycol as the glycol of Caselli et al. as a solubilizing and dispersing agent (McCue et al., col. 4, lines 4-11).

39. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caselli et al. (EP 1146111) in view of Stevens (U.S. Patent No. 5,712,237) and Scheuing et al. (U.S. Patent Application Publication No. 2003/0220223), and further, in view of Caunt et al. (EP 0965541)

40. Caselli et al. as modified by Stevens and Scheuing et al. is relied upon as disclosed above.

41. Caselli et al. as modified by Stevens and Scheuing et al. fails to teach wherein the carrier is amorphous silicon dioxide.

42. However, Caunt et al. teaches an antimicrobial a composition with a carrier of amorphous silicon dioxide (paragraphs [0001] and [0009]).

43. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose the carrier of Caselli et al. as modified by Stevens and Scheuing et al. to be amorphous silicon dioxide for anti-microbial properties (Caunt et al., paragraph [0009]).

44. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caselli et al. (EP 1146111) in view of Stevens (U.S. Patent No. 5,712,237) and Scheuing et al. (U.S. Patent Application Publication No. 2003/0220223), and further, in view of Hartman et al. (U.S. Patent Application Publication No. 2005/0106121).

45. Caselli et al. as modified by Stevens and Scheuing et al. is relied upon as disclosed above.

46. Caselli et al. as modified by Stevens and Scheuing et al. fails to teach wherein the carrier is a self-adhesive item or label.

47. However, Hartman et al. teaches a composition for disinfecting a space (paragraph [0016]) wherein the carrier is a self-adhesive item or label (paragraphs [0063] and [0065]).

48. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose a self-adhesive item or label for the carrier of Caselli et al. as modified by Stevens and Scheuing et al. for generating desirable amounts of chlorine dioxide gas over a desirable period of time when exposed to water or water vapor to prevent or retard microbial growth within an atmosphere or within an enclosure for a sustained period of time and, therefore, be utilized to control microbial growth on items contained in a package (paragraphs [0016] and [0075]).

Response to Arguments

49. Applicants' arguments filed 11 May 2011 have been fully considered but they are not persuasive.

50. Applicants amended claims to include new claim 43 which included limitation of "wherein the volatile solvent is a lower alcohol".

51. Applicants point to Examples 9-11 to demonstrate the use of lower alcohol as the volatile solvent and glycol and/or water as the non-volatile solvent provides significantly superior effects for disinfecting a space.

52. However, the data is not persuasive given that these are only inventive examples and there is no comparison with other solvents that are disclosed by Caselli et al. that are outside the scope of the present claims.

53. Applicants argue given that Caselli et al. includes an extensive list of possible solvents, there would be no reason to specifically select lower alcohol as the volatile solvent and glycol and/or water as the non-volatile solvent as presently claimed.

54. However, as noted in *KSR*, "A person of ordinary skill in the art is also a person of ordinary creativity, not an automaton," as "in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007). While Caselli et al. does disclose other solvents, the fact remains that the reference explicitly discloses the volatile and non-volatile solvents claimed. Therefore, absent evidence to the contrary, it would have been obvious to one of ordinary skill in the art to utilize solvents in Caselli et al. as presently claimed.

55. Applicants argue that "the mere fact that the purported prior art could have been combined or modified to yield an applicant's invention does not make the combination obvious".

56. However, the reference is not being modified given that the solvents are taught by the primary reference of Caselli et al.

57. Applicants argue that there is no reason to combine Caselli et al. with Stevens or Scheuing et al.

58. However, there is specific motivation to combine Caselli et al. with Stevens, namely, to choose a percent weight ratio, including those claimed, to control the distillation, compatibility, likelihood of forming azeotropes with other cosolvents, solubility with hydrophilic stains and contaminants, and cost (Stevens, col. 6, lines 24-30, col. 10, lines 56-67) and there is there is specific motivation to combine Caselli et al. with Scheuing et al., namely, to choose a non-woven cellulose and polypropylene combination as an effective absorbent material (Scheuing et al. paragraphs [0070]-[0074]).

59. Applicants argue that Caselli et al. "differs significantly" from disinfecting a space given that the composition of Caselli et al. needs to be brought into direct contact with any surface.

60. However, given that the claim only broadly requires "disinfecting a space", it is clear that the surface on which the wipe of Caselli et al. is used would disinfect a space, as presently claimed. Further, given that Caselli et al. discloses composition made from solvents identical to those presently claimed, it is clear that there would be some degree of vaporization by the solvents which would intrinsically disinfect a space.

61. Applicants argue that disinfection of a space "occurs via vapor action",

62. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., occurs via vapor action) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

63. Applicants argue that the "cleaning and disinfection of hard surfaces is distinct from disinfection in general".

64. However, there is nothing in the claims that exclude a hard surface cleaner.

65. Applicants point to the examples of Caselli and states that the data in Caselli et al. is a "basic single-test screening method" which is "in contrast to the present invention, the objective of which is long-term disinfection via the vapor phase".

66. However, nothing in the claims requires long-term disinfection.

67. Applicants argue that "the teachings of Stevens et al. differ significantly from Caselli et al. and the current invention".

68. However, applicants' are reminded that according to MPEP 2141.01 (a), a reference may be relied on as a basis for rejection of an applicants' invention if it is "reasonably pertinent to the particular problem with which the inventor is concerned." A reasonably pertinent reference is further described as one which "even though it maybe in a different field of endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem." Stevens et al. is, therefore, a reasonably pertinent reference, because it teaches cleaning compositions comprising a mixture of volatile and non-volatile solvents in amounts including those presently claimed to control the distillation,

compatibility, likelihood of forming azeotropes with other cosolvents, solubility with hydrophilic stains and contaminants, and cost, which is a function especially pertinent to the invention at hand.

69. Applicants argue Stevens et al. has “nothing to do with improving the surface-disinfecting, anti-microbial composition disclosed by Caselli et al.”

70. However, there is overlap between the compositions of Stevens et al. and Caselli et al. given that Stevens et al. discloses a cleaning composition comprising a mixture of volatile solvent, which may be isopropanol, and non-volatile solvent, which may be water (Stevens et al., col. 6, lines 30-35, col. 10, lines 50-52)

71. Applicants argue that “the ratios of volatile solvent to non-volatile solvent of Caselli et al. reside far outside the claimed range of 3:1 to 1:3” and in fact “directs away” from the present invention.

72. However, “applicant must look to the whole reference for what it teaches. Applicant cannot merely rely on the examples and argue that the reference did not teach others.” In re Courtright, 377 F.2d 647, 153 USPQ 735,739 (CCPA 1967).

73. Applicants argue that “the cited prior art does not disclose any composition that has a range that overlaps or encompasses the claimed range”.

74. However, given that Stevens discloses a range of 50:3 to 1:15, the cited prior art clearly overlaps that presently claimed.

75. Applicants argue that Scheuing et al. does not teach a composition for disinfecting a space.

76. However, note that while Scheuing et al. does not disclose all the features of the present claimed invention, Scheuing et al. is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely a carrier that is a non-woven material and of a combination of cellulose and polypropylene, and in combination with the primary reference, discloses the presently claimed invention.

77. Applicants argue that Caselli et al. does not teach the claimed carrier material.

78. It is agreed and that is why Caselli et al. is used in combination with Scheuing et al. which provides motivation for using a non-woven cellulose and polypropylene combination for the carrier.

79. Applicants argue that Caselli et al. does not disclose the function of the carrier being to release the disinfecting composition into the surrounding space.

80. However, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., function of the carrier being to release the disinfecting composition into the surrounding space) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

81. Applicants argue that the claimed ratio of volatile to non-volatile solvent in the range of 3:1 to 1:3 provides unexpectedly significant improvements on anti-bacterial effects over the prior art ranges and points to the third and fourth rows of Table 3.

82. However, the data is not persuasive given that the data is not in scope with the scope of the present claims given that there is no data at the lower end of the ratio and that there is only data for one specific volatile and non-volatile solvent while claim 1 broadly encompass all volatile and non-volatile solvents. Further, the results appear to correspond to time, i.e. all ratios produce good results at 0 weeks and ratio of 5:1 produces good results at 2 weeks. However, there is no limitation in the claims requiring time. Furthermore, in the data there is no carrier used which is required in all the present claims.

Conclusion

83. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHENG YUAN HUANG whose telephone number is (571) 270-7387. The examiner can normally be reached on Monday-Thursday from 8 AM to 4 PM.

84. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho, can be reached at 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

85. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. H./

Cheng Yuan Huang

Examiner, Art Unit 1787

June 2, 2011

/Callie E. Shosho/

Supervisory Patent Examiner, Art Unit 1787